Job Description: Pip Evaluator: Cheryl Bennett, Me. Supervisor/ Contact Patsy Gilbert, Patti I	lanie Alexandre cts: Kluck, Paul Borenstein		
Neck	 □ No Problem Observed □ Twisted (rotated) □ Tilted Back □ Tilted Forward □ Lateral (bending side to side) □ Other 	Specific Job Tasks: Pipetting Writing on tubes Opening and closing caps	Solutions: Provide education Explore equipment options: document holders for reference materials and/or writing, tube openers/ closers, magnifying glasses, wide grip pens
Wrist/Hand	 □ No Problem Observed ☑ Flexion ☑ Ulnar Deviation ☑ Extension ☑ Radial Deviation ☑ Excess Thumb Use 	Specific Job Tasks: Pipetting Small writing on tubes Opening/ closing caps Use of vortex	Solutions: Provide education Provide wide grip pens Alternate hand use Choose appropriate tool for task Relocate equipment and supplies
Elbows/Forearm	 □ No Problem Observed ☑ Flexed (arm bent up) ☑ Extended (arm straight) ☑ Winged (away from body) □ Supination (palm up) □ Pronation (palm down) ☑ Sustained extension/flexion □ Other 	Specific Job Tasks: Pipetting Reaching for supplies Use of vortex	Solutions: Provide education Relocate equipment and supplies Explore equipment options: lazy susan
Back	 ☒ Forward Bending ☒ Slouched ☒ Inadequate Lumbar Support ☒ Twisted ☒ Static Standing 	Specific Job Tasks: Pipetting	Solutions: Provide education Explore equipment options: anti-fatigue mats, ergonomic chairs/stools Relocate equipment and supplies
Shoulders	 □ No Problem Observed ☑ Forward Reach □ Reaching Behind □ Raised shouldler height ☑ Raised/chest height 	Specific Job Tasks: Pipetting Reaching and disposing tips/caps/ tubes Reaching for vortex	Solutions: Provide education Relocate equipment and supplies Explore equipment options: adjustable height work stations
Legs	☑ Insufficient leg clearance☑ Stance	Specific Job Tasks: Prolonged standing	Solutions: Provide education

	□ Other	When sitting on lab stools noted inadequate thigh clearance and lack of back/foot support	Explore equipment options: anti-fatigue mats, ergonomic chairs/stools Explore environmental options: remove facing and/or drawers
Other	■ Work surface height nonadjustable	Specific Job Tasks: Fixed counter heights	Solutions: Provide education Explore equipment options: adjustable workstations
Repetitive Activities		Specific Job Tasks: Grasping, reaching, use of thumb, pinching	Solutions: Provide education Explore equipment options: ergonomic chairs/stools Relocate equipment and supplies
Static Postures		Specific Job Tasks: Neck position, grasping, sitting, standing, pinching	Solutions: Provide education Explore equipment options: ergonomic chairs/stools, antifatigue mats
Contact Stress/Pressure/ Vibration		Specific Job Tasks: Edge of work surface/ counter/bench Use of vortex	Solutions: Provide education Explore equipment options: edge padding Use of automatic vortex when possible
Work Style/Flow		Specific Job Tasks: Some tasks are time sensitive (example: incubation of cells), so must be done continuously. Can take self paced minibreaks	Solutions: Provide education
Environment (organization, access, layout, hazards, lighting, temperature)		Specific Job Tasks: Accessing supplies and equipment	Solutions: Relocate supplies and equipment

Equipment require Vorte Therm disposed caps, closer Some ergon	tes (different pipettes re different tips), ex, Plate Vortex, mocycler, Centrafuge, sal bins for used tips, tips, tube opener/ r tools e scientists reported the formic pipettes result in of control/ precision	Various types of pipettes available including: Pipette Man Pipette Plus (one less thumb movement) Electric single pipette (pistol handle) Electric multiple channel pipette (8 or 12 channels) Pipette Aid (long tube for large volume) Rainin LTS (light touch system) Eppendorf 500 Eppendorf 1000 (excess thumb pressure to expel tip) Benchmate II by Nichiryo (autoclavable)	Solutions: Eliminate Eppendorf 1000 as a choice since it is a high ergonomic risk (excessive thumb pressure to release tips) Explore equipment options: pipettes Education regarding various types of pipettes available Use tube opening/ closing tools

Summary:

- 1. Provide education and/or training in the following areas: hand use, stretching, arm use, alternating hand use, mini-breaks/ posture changes, neutral posture, types of pipettes
- 2. Explore equipment options: document holders, wide grip pens, magnifying glass, pipette selection, lazy susan, adjustable height tables, anti-fatigue mats, ergonomic chairs/ stools, tube opener/ closer,
- 3. Explore environmental options: relocating supplies and equipment, removal of facing/ drawers of counters
- 4. Create a survey to identify individual workstation equipment and environmental needs
- 5. Do ergonomic evaluations at each of workers workstations. Create a needs survey to prioritize evaluations

Pipette Risk Analysis Photos

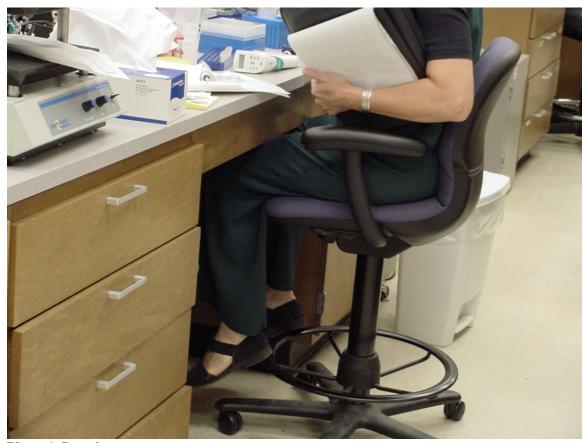


Photo 1. Leg clearance.



Photo 2. Pipette posture.



Photo 3. Pipette posture using thumb.



Photo 4. Writing on tubes.